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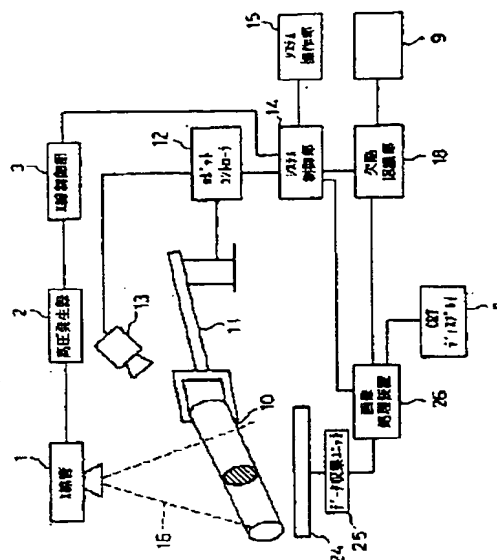
APPLICATION DATE : 22-10-90  
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TITLE : INSPECTING APPARATUS BY X-RAY



ABSTRACT : PURPOSE: To effect an inspection being precise and having a large degree of freedom, by conducting X-ray scanning in a desired direction while moving a body to be inspected and by detecting a defect from an image prepared by detecting an X-ray transmitted through the body to be inspected.

CONSTITUTION: A workpiece 10 is irradiated, and an X-ray 16 transmitted therethrough and attenuated is detected and converted into an electric signal by a line sensor 24. This analog output is converted into a digital signal by a data collecting unit 25, and an image processing device 26 receives this signal as an input. In an ordinary real-time inspection, the device 26 executes processing in the sequence of storage, smoothing, emphasis of a contour and an image output, and while a CRT display 7 displays the image output after the processing, a defect recognizing element 18 receives it as an input and detects a defect of the workpiece 10 therefrom. As to the result of defect determination, an output device 9 delivers an output as to whether the result is good or bad, by indication by a lamp or the like. Meanwhile, a robot hand 11 holding the workpiece 10 moves or rotates the workpiece 10 in a desired direction and makes it scanned by a fan beam of the X-ray 16. Thereby the execution of inspection being precise and having a large degree of freedom is enabled.

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